

PLANT COLLECTING IN THE SOLOMON ISLANDS*

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With two text-figures

TO THE EAST of New Guinea lies a very important chain of Islands, known as the Solomons; this archipelago has great affinities with the Papuan mainland. The people of the two regions are of similar races, having many characteristics in common. The vegetation of the Solomons, although similar in general to that of New Guinea, has certain peculiarities suggestive of the islands farther eastward. There is a political boundary within the Solomons, a portion of the group being under English and a portion under Australian administration. This political boundary, at the time of my visit, was very strictly recognized, as the natives were not allowed to cross it and the whites were required to show passports or permits when crossing it. For biological and geographical discussions the political boundary may be ignored, and all the islands extending from Bougainville to the Santa Cruz group may be considered to make up the Solomons.

The geological formation of the Solomons is of a highly volcanic nature, the soil being remarkably fertile, the rainfall heavy, and the vegetation very luxuriant. For the greater part the islands are exceptionally mountainous and rugged. On Bougainville there is a mountain-chain extending down the center of the island and reaching a height of 10,000 feet, while on Guadalcanal the mountains attain 8,000 feet in height. Most of the smaller islands have mountains up to 5,000 feet in height, and very commonly precipitous hills arise directly from the sea.

The plant life of the Solomons can be divided into two primary groups—that of the lowlands and that of the uplands. As there are very extensive plains on many of the islands, one observes a type of lowland vegetation very different from the usual strand vegetation of the Pacific. The huge plains of southern Bougainville offer an example of lowland inland flora.

* The manuscript of this article has been for some time in the possession of Dr. C. T. White, of the Brisbane Botanic Gardens, by whom it was recently forwarded to the Arnold Arboretum for possible publication. In view of the fact that a complete set of Mr. Kajewski's Solomon Islands plants is deposited at the Arnold Arboretum, where they have been studied and published upon by staff-members, publication of this sketch seems highly desirable. A remarkably high percentage of Mr. Ka'ewski's specimens have proved to represent new species, as he reached areas and altitudes not visited by the few collectors who preceded him in the Solomons. For an account by the same collector of his work in the New Hebrides and Santa Cruz Islands, see *Jour. Arnold Arb.* 11: 172-180. 1930. — Eds.

It is interesting to note that the genus *Casuarina* is found at this altitude, although it is absent from the intervening strip between the sea-coast and 3,000 feet. A *Dacrydium* is also found here, but it is by no means plentiful.

Kupei Goldfield (or perhaps it should be called Copperfield, since the lode is a reef with about 15 percent of copper and a small percentage of gold in it) is about nine miles inland from the northeast coast. Kupei is the name of the last village on the trail, but the lode is approximately 1,500 feet higher. Farther inland the mountains ascend to nearly 6,000 feet, forming the backbone of the island, and consequently precipitation is very heavy. Rain occurs essentially every day, and the region is shrouded in heavy mist for six to eight hours of each day. The sun may be observed shining in the morning, with a few light clouds, when suddenly and without warning banks of clouds come from nowhere and darken the whole atmosphere. The afternoons are invariably misty and foggy. Under these conditions everything in camp is moist and uncomfortable, and the drying of plants is exceedingly difficult. Without the use of artificial heat a collector would find his work impossible. Toward evening the rain ceases and the nights are usually fine. The climate is comparatively cool, perhaps about 15° F. cooler, day and night, than on the coast.

In this vicinity a giant black-stemmed banana is very abundant, the plants being up to 30 feet high; the fibers of this plant should be investigated for commercial possibilities. Several species of *Begonia* are very striking, one species in particular having very showy pistillate flowers and shiny pinkish purple iridescent foliage; it seeds freely in the native state and may prove desirable for greenhouse culture. Tree-ferns, species of *Asplenium*, and various epiphytic plants are abundant in the vicinity of the goldfield, but orchids are scarce. A medium-sized *Casuarina* is peculiar to this level. Moisture-loving plants are naturally common, and mosses and lichens, although not as plentiful as one might suppose, are nevertheless abundant. I have visited other mountains with a lighter rainfall where the rocks and trees are much more heavily covered with cryptogams. The soil near the goldfield is very porous, and one may anticipate that all soluble plant food will soon be leached away if the rain-forest is cleared for cultivation. Consequently it would be necessary to emulate the native agriculture and to clear patches of forest annually, if this region should ever attract a large population.

Turning to the south coast of Bougainville, one finds a very different type of country, due to the fact that the southern end of the island is occupied by a large fertile plain. This plain should have great agricultural possibilities in the future. It is composed of volcanic drift and supports a large native population. The Buin district is very rich in palms, in this respect being the richest locality I have ever encountered. Although the plain is low-lying, it is not swampy, the land rising gradually from sea-level to the foothills. The actual strand-flora, of course, contains the usual pan-Pacific elements. The rainfall of Buin is between two hundred

and three hundred inches annually; nevertheless regions away from the coast are reasonably healthy and mosquitoes are not unbearable, since the drainage prevents the accumulation of large amounts of standing water.

On the Buin and Siwai plains (see map, *fig. 1*) one is impressed by the good roads which are maintained by the natives under government supervision. There are about 20,000 natives in this area, and the Patrol Officer can do much of his traveling by bicycle; this seems strange in a region where the only other non-native inhabitants are a few missionaries. A predominating feature is the large number of huge trees left standing by the natives. These are trees of economic value, and they tower above the lower regrowth rain-forest, being 150 to 200 feet high. They have been left undisturbed for centuries, as one can see by their dimensions. Notable examples are specimens of *Canarium*, native mangoes, bread-fruit trees, *Syzygium*, *Ficus*, etc.

In the high mountain-ranges around Lake Luralu, one is impressed by the giant timber provided by specimens of *Calophyllum*, *Albizzia*, etc. The lake itself is worthy of mention; it is serpentine in shape and is the sacred place of the natives of the plains. Cremation is practiced in this region, and the dead are supposed to go to the lake and there wash off their ashes, subsequent to which they spend a happy spiritual life in the vicinity. It is difficult to persuade natives to go to Lake Luralu, and I appreciated the assistance of Patrol Officer Ward, who not only accompanied me but also arranged for native carriers. The lake has an elevation of about 5,500 feet and the vegetation in its vicinity is stunted. Species of *Rhododendron* occur there, one of them with large white flowers being suggestive of a garden azalea. Parasitic tree-forms are also in evidence. The whole mountainous area is for the greater part of the time shrouded in fog, and mosses and lichens are abundant; it is certainly one of the most interesting areas of Bougainville from a botanical viewpoint.

MALAITA

From Bougainville I went to the British Solomons, where I received less coöperation than from the authorities on Bougainville. The British Solomons appeared to me to be administered in a comparatively lackadaisical fashion, the hill tribes being encouraged to come and live on the coast. This is a great mistake, as the interior, already difficult of access, is even less approachable after the natives have left. On the island of Malaita the resident government official not only refused to coöperate with me, but he influenced the natives in such a way that I could not obtain carriers. Consequently my work on this island, toward the end of 1930, was very limited (see map, *fig. 2*).

GUADALCANAL

Guadalcanal, where I spent the entire year of 1931, is an extremely interesting island botanically. On the north coast there are extensive

stretches of grassy plains which consist of upraised ocean-floor, as shown by recent marine fossils. These fossils are very abundant and are seen in formations more than 100 feet thick, on exposed slopes of foothills. The plains are covered by a species of *Themeda* which grows to a height of about six feet and provides good fodder for cattle. Consequently large numbers of cattle and horses are pastured on the island. The pastures are in belts which are practically treeless, surrounded by patches of lowland

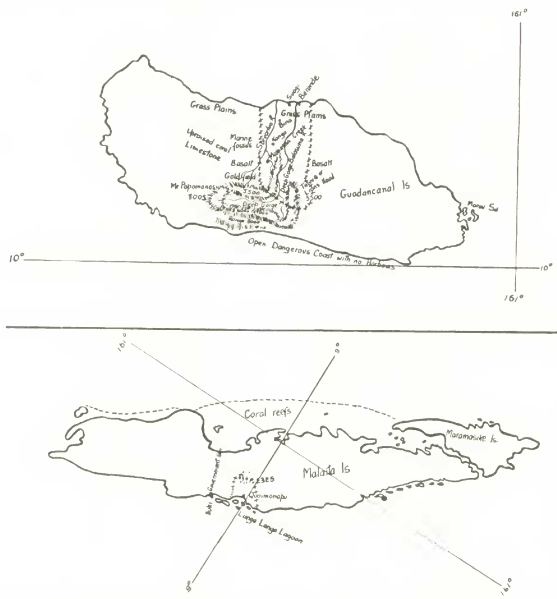


FIG. 2. Sketch maps of Guadalcanal (above) and Malaita (below), showing areas visited by the writer.

rain-forest and extending in a limited manner to the foothills. The only reason I can advance to account for the fact that these plains are not occupied by rain-forest is due to native methods of hunting. The grass has perhaps been fired by the natives for generations in order to drive out the pigs. When a strong wind is blowing the flames can destroy the

edges of the bordering rain-forest for a width of a couple of chains. Thus aided, the grass-plains appear to be slowly but surely extending and encroaching on the forest.

The next formation toward the interior is marked by the beds of marine fossils mentioned above, in which many of the present-day forms of sea-life are visible. Here grass and forests mingle on the foothills, gradually merging into the primeval types of rain-forest. In gorges the trees attain very large dimensions, a species of *Calophyllum* being especially noteworthy.

I may mention, in passing, that I once collected on a supposedly sacred mountain, and subsequently was tried by the government for violating a native sanctuary. Although I was freed of the charge, this will illustrate my contention that government officials in the British islands were not exactly coöperative. The "sacred" mountain is a bold upstanding mass named Mt. Tatuve (Tutuve), or the Lion's Head (see map, fig. 2). My collections from this region were of unusual interest, although the rainfall is much less than on Bougainville. The only showy flowering plants on the mountain-tops are species of *Rhododendron*. In this vicinity I obtained a great deal of information pertaining to the superstitious usages of plants by the natives, but no plants of outstanding merit for medicinal purposes were discovered. As these natives were living in a stone-age civilization upon the arrival of the white men, it may safely be assumed that they had no systematic methods of treating diseases.

FOOD PLANTS

The inhabitants of the Solomons are skilled in agriculture of a type not much advanced over the stone-age. In this region nature is so provident that food can be grown simply and with a minimum of exertion. In the following paragraphs I shall discuss the principal plants which the natives used in their domestic requirements.

TARO, *Colocasia esculenta* (L.) Schott. Taro is perhaps the most valuable food plant in the entire western Pacific. There are innumerable forms and local varieties, perhaps running into the hundreds. For convenience, the varieties may be divided into two groups, like rice—the upland and the swamp varieties. The upland type is the one universally cultivated, the swamp type being much coarser but yielding larger corms. In the wild state all the forms have a fibrous corm of inferior quality, containing a greater amount of calcium oxalate crystals than the cultivated forms. To obtain a long starchy corm has doubtless taken a very long period of cultivation and selection.

Planting the taro is a simple but effective procedure. A cylindrical hole about eighteen inches deep is made with a large stick, and in the hole the head of a taro plant of which the corm has been eaten is placed, the long leaves protruding from the hole. The heavy rains fill in the hole, and so the native is spared even this slight effort. After about nine months the

corm is large enough to be gathered and eaten, usually being either baked or boiled. The top portion, with the leaves attached, is replanted. Reproduction is also effected by allowing the plants to sucker, the new shoots then being planted; these new shoots mature more slowly than the tops of old plants.

On some islands, and especially in mountainous districts, hillside streams are diverted around terraces and large quantities of a water taro are grown. This variety grows with its roots in the water and attains a height of about six feet, with correspondingly large corms. The stream taro is not as popular as the upland forms, and probably only about five percent of the taros used in the Solomons are of this type.

In general, the taro will not thrive in regions of low rainfall. It makes up the bulk of the food of the natives in the interiors of all the large islands. Europeans are not usually fond of this food, as the corms are inclined to be more fibrous than are those of most cultivated vegetables; nevertheless the taro is excellent as a change of diet and is not to be despised in cases of necessity. It must be remembered that all taros must be cooked before being eaten, in order to render innocuous the calcium oxalate crystals. I recall one case in which a District Officer suspected the use of taro juice as a poison. According to the native evidence, the raw juice was put into cooked food, thus causing severe pain in the victim's throat. Although such pain would not be fatal by any means, the native mind is very susceptible to imagination, and it is not impossible that death might be caused by the mere thought of having been poisoned.

YAM, *Dioscorea* spp. Next in importance to taro in the Solomons are yams, which are cultivated in the drier areas, as they will tolerate fairly long periods of drought. Soils near the beaches are usually more sandy than those of the interior, and yams seem to prefer this type of soil. However, they are sometimes grown on wet islands, and I believe that tradition has a great deal to do with whether islanders of certain regions prefer yams or taros. There is an endless variety of yams, from monsters 70 to 80 pounds in weight to small ones the size of carrots. Owing to the fact that their runners need large supports, yams are suitable to newly felled areas of virgin bush, where plenty of large branches are left for the plants to climb over. After the yams have been harvested, bananas are planted in the same area and are left to grow in competition with the tall weeds; in a few years the field becomes jungle-covered and after about ten years it may again be cleared and used for another crop of yams.

Both yams and taros may be cooked in a variety of ways. Often they are boiled and mashed, and to the sticky mass grated coconuts are added, or sometimes the grated kernels of *Canarium* nuts. If the latter nuts are used, they are usually first hung over a fire and smoked and allowed to become rancid; the resultant strong flavor adds piquancy to the dish in the opinion of the natives. There are several species of aromatic herbs which the natives sometimes add to starchy foods. These herbs are in demand at feast times, but usually it is considered too much trouble to

gather and prepare them. As long as food is available the natives seldom need any appetizer; they do not like vegetables cooked too soft, even rice, when available, being cooked in a manner almost indigestible to Europeans.

In my observation, the natives of the Solomons are not as highly skilled agriculturists as those of Tanna, in the New Hebrides. The Tannese have raised the cultivation of yams to a very high standard. They sift the soil and make high mounds, rich in humus and bacteria, in which the yam is planted; the vines are trained over well-built supports, and the resultant crop is very large, yams of 70 or 80 pounds being commonplace. The Tannese build yam houses with ventilated sides and store the yams for as long as nine months, until the new crop is ready. In other parts of the western Pacific I have not observed such a high standard of agriculture as on Tanna, the natives of which are quite superior both physically and intellectually.

WILD BANANAS, *Musa* spp. In one form or another, wild bananas are met with frequently in the rain-forests. In fact, one observes patches of giant bananas, with trunks up to 30 or 40 feet high, growing in dense stands with little or no other vegetation. They prefer wet or damp situations, such as the slopes of the high mountain ranges on Bougainville. All the wild ripe fruits I saw in the Solomons were of an orange color, insipid in taste, the pulp being full of small black seeds.

The banana has a multiplicity of uses, pertaining to food, clothing, fibers, sap used as a dye, etc. As a food it enters largely into the dishes prepared for feasts, as it is always one of the constituents of native puddings. It is noteworthy that the same type of pudding is found throughout the western Pacific and even extending eastward. It is prepared by grating and kneading a starchy material, such as yam or taro, to which is added the flesh of fish or fowl, and bananas. Of course the fruits are also cooked in a variety of other ways, being baked, boiled, or even fried — the latter method being copied from the whites.

The leaves of the banana are used for wrapping meat, fish, or puddings, which are then steamed on glowing coals. Additional banana leaves are heaped on top to keep in the heat, and after about three hours the food is excellently cooked. Skirts are manufactured from the leaves with a minimum of effort. The frond of a large banana, ten feet long or more, is split down the middle of the midrib, and the blades of the two portions are then split like combs and placed on hot sand to dry. The blades shrink to a wispy material, and about half a dozen layers are worn as a skirt, thus solving the clothing problem very easily for the ladies. In the Santa Cruz group the fiber from the stems of bananas is woven into mats and baskets, by means of a loom and shuttle. Considering the crudeness of the apparatus, very beautiful work is done and colored patterns are skillfully introduced.

SAGO PALM, *Metroxylon salomonense* (Warb.) Becc. Among the most valuable plants of the Solomons, the coconut palm would of course rank very high, but so much has been written about the uses of this species

that I can add nothing. Another very valuable palm, the sago palm, however, is also of extreme value to the natives. Its fronds supply one of the most popular and durable thatches; the large pinnae are stripped off and sewn together on a pole, these poles being used in a manner similar to shingles. European houses in isolated places in the Solomons are similarly thatched, as roofs of this material provide very cool houses.

The trunk of the *Metroxylon* supplies huge quantities of sago, which is gathered after the tree has flowered and fruited, usually after about 20 years of growth. When this period arrives, the tree is felled, the trunk split, and the starch grains loosened by beating. The particles are then washed in troughs full of water, and the starch sinks to the bottom, from which it is collected and spread in the sun to dry. The starch has the appearance of arrowroot, as which it is sometimes used by the white settlers. Used by itself it is very constipating, and so a great deal of coconut oil is mixed with it in cooking.

Great quantities of the nuts of the sago palm are collected every year and sold to Japan as ivory nuts of commerce, being used as a substitute for ivory in cheap articles and in the manufacture of buttons. These nuts are said to be not as good as the ivory nuts of South America (*Phytelphas macrocarpa* R. & P. or spp.), but at times there is a considerable demand for them owing to the proximity of the Japanese market.

OTHER PALMS. Buin, in southern Bougainville, is strikingly rich in native palms, which cannot be said of all the islands. However, the Solomons are doubtless richer in palms, on the whole, than the New Hebrides. The uses of palms in the native economy are legion. The trunks of all species have a pithy center and an extremely hard exterior; they are very easily split, after which the soft pith is chopped away and the remaining lathe-like strips used for a very durable flooring in native houses. The outer part of the trunk of the taller species is very hard and takes a good polish, and this wood has been used for centuries in making bows, spears, and other weapons. When making a temporary camp in the bush, the natives use the fronds of any species for shelters. The fronds of the broader cabbage-leaf type are made into light mats on which the natives sleep and which they carry over their heads as a protection against rain.

The crown or undeveloped young fronds of some species can be boiled and eaten as a vegetable. The head of the palm is cut open and the soft immature fronds removed, the coconut palm being especially prized as a source of a salad. Of special interest is the nipa palm, *Nipa fruticans* Thunb. The natives collect the fronds of this species and burn them when they are dry, the resultant ash being used in a manner similar to salt.

BREADFRUIT, *Artocarpus altilis* (Parkinson) Fosberg. Every traveler refers to the breadfruit, one of the principal food plants of the Pacific. In addition to its edible fruit, it possesses a very valuable sap which serves as a strong glue in the manufacture and mending of canoes. The trunks

of the trees also make very good canoes, but the fruit is too valuable to permit of many trees being used in this way.

NARLI NUTS, *Canarium* spp. Species of *Canarium* have a wide distribution over the whole of the southwestern Pacific. The trees have very large flanges or buttresses and a tall light-colored trunk, and they are outstanding in the rain-forest. The genus is of great economic value, as its members produce great quantities of nuts, which have an exceptionally high food value, being esteemed by natives and whites alike. As the native is essentially a vegetarian, the oil-ration provided by *Canarium* nuts is a decided addition to his diet. Immense crops of the nuts are produced for four, five, and even six months of the year. They are smoked and preserved in various ways, this being the only food which is stored except for yams and breadfruit, in my observation. The mountain natives make regular pilgrimages down to the coast to barter for the nuts, using them to flavor taro puddings. Wherever the natives destroy the forest for the purpose of making gardens they leave the *Canarium* trees, taking great care that fires do not scorch or damage them. As a result, these trees are very numerous and large, often with a height of 140 feet and a diameter of six feet.

Canarium nuts are known as "garlips" in the Mandated Territory, "sailor" in the Solomons, "narli" in the Santa Cruz group, and "nungi" or "ni" in the New Hebrides. There is a wide range of varieties and species. The largest and oiliest nuts come from the Santa Cruz group, from a tree comparatively small in stature but bearing tremendous crops. One wonders whether this prolific tree could be the result of long cultivation and selection. The timber of *Canarium* might be of value as a cabinet wood, but I do not know of a single instance where a tree has been felled, as this would be sacrilege in the eyes of the natives. In the Mandated Territories it is illegal to cut any of these trees or any other trees which are used for food by the natives.

UPOLU OF OOPERU, *Gnetum gnemon* L. This species is a large factor in the supply of green vegetables in the Solomons. Everywhere along the roads in Buin on southern Bougainville one can see the trees growing, as they have been left by the natives when the rain-forest was cleared. The tree has a tall erect pine-like manner of growth; whether this is natural or whether it is caused by the continual stripping off of the smaller branches I am unable to say. The method of collecting the leaves is amusing; a young boy is selected to climb the tree and break off the young branches, which are thrown down to natives under the tree. Only the terminal leaves are removed from these branches, and these young leaves are then boiled and eaten like cabbage. This vegetable has a unique flavor which is entirely pleasing to most Europeans.

In a somewhat similar manner the young leaves of "akamu" (*Polyporandra scandens* Becc.) and "numarrie" (*Rhyticaryum* sp., *Kajewski* 2072), both of the Icacinaceae, are prepared and eaten.

FIGS, *Ficus* spp. The figs of the South Pacific are very difficult to

classify botanically, as the species are numerous and variable. Before the arriva! of the white men, figs probably had a more important place in the native economy than at present. One species has a strong thick bark which was beaten out to make a cloth resembling tapa (from *Broussonetia papyrifera* Vent.). The thicker portions of this bark were not beaten out but were cut into long strips, being used for thongs in a manner similar to leather.

The large fleshy leaves of some species are cooked and eaten as vegetables; I have tried these and have found them excellent, if only the young and tender leaves from the apices of branchlets were selected. The leaves of other species are very rough and are used as sandpaper, to finish native weapons such as spears and also to polish ornaments, combs, etc. The fruits of most figs are eaten by fruit-loving birds such as pigeons and hornbills.

PIPERS, *Piper* spp. The genus *Piper* is widely distributed throughout the tropics, supplying the pepper of commerce and the "kava" (*Piper methysticum* Forst. f.) of Polynesia. Kava-drinking is not indulged in in the Solomons, but the betel nut is extensively used. There is a sharp dividing line between these two customs, which coincides with the political boundary between the New Hebrides and the Santa Cruz group. Betel nut chewing is unknown in the New Hebrides.

The leaves of some pipers have a very pleasant odor when bruised, and are used by the natives to rub on their bodies. Other species play an important part in native religions, the fruits or roots sometimes being burned to frighten away evil spirits. The leaves of another species (*Kajewski* 2185) are rubbed over the body in order to drive out a poison or to banish a devil. Many species are rich in essential oils, and I have no doubt that the indigenous pipers of Bougainville will be worth chemical investigation.

PANDAN, *Pandanus* spp. In strand floras throughout the Pacific and often found inland up to 5,000 feet elevation are many different species of *Pandanus*. Some species attain a stature of 30 or 40 feet, a notable example of a tall species occurring on the Crown Prince Range of Bougainville, where there are pure stands with little or no forest of other constituents. Pandans have a multiplicity of uses for the islanders. The long leaves are split, after soaking and bleaching in salt-water, and are plaited into mats, baskets, and "grass" skirts. This work is done by the women, and great jealousy is attached to the rights to leaves from certain plants concerning which a sort of priority has been established. In one case I knew of a woman who cut down one of "her" trees because another woman had gathered leaves from it.

Pandan fruits contain small oily kernels which provide a very concentrated food in case of emergency, although to gather the kernels is slow work. The juice of the ripe fleshy fruits is also palatable, and the head has a fine fruity fragrance when ripe.

BARRINGTONIAS, *Barringtonia* spp. Some species of this genus have non-

edible fruits which are sometimes considered poisonous, this type being associated with swamps. The nuts of other species are edible and the tree is worth cultivating for this reason as well as for its ornamental value. The fruits have a fibrous outer covering, the kernels having a taste similar to the almond.

GENERAL SUPERSTITIONS. The natives of the Solomon Islands have many quaint superstitions which have been handed down for centuries; their whole lives, in fact, are wrapped in superstition. When a native builds a house, the first thing he thinks of is to grow suitable plants to stop the evil spirits from entering his house as he sleeps. Sometimes, in villages, there is a fringe or boundary of these protective plants around the whole village. When a house stands by itself even greater efforts are taken to protect it by the judicious use of plants, since the spirits are more forward where solitary houses are concerned. The plants most widely used for this purpose are wild aromatic gingers, which give off a pungent odor when crushed. Highly decorative plants such as crotons, euphorbias, and hibiscus are used to please the spirits. This of course is the case in pagan villages; in Christian villages these customs would be distorted, but nevertheless the same plants are still used as ornamentals.

When the pagan native starts to clear the rain-forest, he knows that he is going to offend the spirits by making the forest unsightly, and so he tries to appease them by leaving certain plants standing. These plants vary from island to island, but certain aromatic plants like wild gingers are invariably left undisturbed. Again, when the crops are planted, certain gay decorative and aromatic plants are allowed to grow with the crops, as though the native were reassuring the spirits that he intended to leave the land beautiful. Certain areas or patches of forest are "tambu" and their cutting is forbidden, for which reason one often sees a patch of tall undisturbed forest near a village.

The islanders are very fond of aromatic plants and grow many of them for ornamental purposes and for perfume. One observes the greatest use of these at feast times. Traders exploit this desire for strong perfumes by importing cheap scents which in some districts are replacing the native plants for this purpose.

METHODS OF GARDENING. For ages past the natives of the Solomons have been tillers of the soil. A strong tropical sun, a genial climate with no great extremes, bounteous rainfall, and rich soil enable them to produce all the food they require with little effort. The gardens are primitive affairs, with no attempt at serious cultivation. The only great effort is to erect pig-proof fences, for all the pigs, although native-owned, run wild and depend for their livelihood upon their foraging propensities.

The staple of the native diet is taro, and as the native eats but one regular large meal a day he has to plant about 500 taros for a food-supply of six months to one year. He can also, if inclined, set out a few banana suckers, some sweet potatoes, and some tapioca in addition to the plants discussed above. Meanwhile, a single sago palm will provide an enormous

quantity of food. The *Areca* nut grows in a semi-wild state, and so his betel nut stimulant costs nothing. Coconuts are grown everywhere up to an altitude of 1,500 feet, while other nuts provide edible oils, and young leaves of various plants provide greens. Tobacco grows almost wild and can be dried and twisted with very little trouble. It is only the desire for trade goods — knives, other tools, mirrors, and calico — that causes the native to condescend to work for the white man.

To prepare a garden the native selects a piece of bush that has not been cultivated for many years, the longer the better. All the trees except the larger ones are felled, allowed to dry, and fired. The unburned logs are piled up against the larger trees, which are sometimes then killed by a second fire. Next the native builds his pig-fence, and his share of the operation is completed. The planting, harvesting, gathering firewood, and cooking are left to the women. One might suggest, in conclusion, that exponents of women's rights would have grounds for a campaign in the Solomons.